



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

July 26, 2011

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

VIA E-MAIL

Mr. Duane Highley  
Director Power Production  
Associated Electric Cooperative  
2814 South Golden  
P.O.Box 754  
Springfield, MO 65801-0754

Dear Mr. Highley,

On October 6 and 7, 2010 the United States Environmental Protection Agency ("EPA") and its engineering contractors conducted a coal combustion residual (CCR) site assessment at the New Madrid Power Plant facility. The purpose of this visit was to assess the structural stability of the impoundments or other similar management units that contain "wet" handled CCRs. We thank you and your staff for your cooperation during the site visit. Subsequent to the site visit, EPA sent you a copy of the draft report evaluating the structural stability of the units at the New Madrid Power Plant facility and requested that you submit comments on the factual accuracy of the draft report to EPA. Your comments were considered in the preparation of the final report.

The final report for the New Madrid Power Plant facility is enclosed. This report includes a specific condition rating for each CCR management unit and recommendations and actions that our engineering contractors believe should be undertaken to ensure the stability of the CCR impoundment(s) located at the New Madrid Power Plant facility. These recommendations are listed in Enclosure 2.

Since these recommendations relate to actions which could affect the structural stability of the CCR management units and, therefore, protection of human health and the environment, EPA believes their implementation should receive the highest priority. Therefore, we request that you inform us on how you intend to address each of the recommendations found in the final report. Your response should include specific plans and schedules for implementing each of the recommendations. If you will not implement a recommendation, please provide a rationale. Please provide a response to this request by August 23, 2011. Please send your response to:

Mr. Stephen Hoffman  
U.S. Environmental Protection Agency (5304P)  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

If you are using overnight or hand delivery mail, please use the following address:

Mr. Stephen Hoffman  
U.S. Environmental Protection Agency  
Two Potomac Yard  
2733 S. Crystal Drive  
5<sup>th</sup> Floor, N-5838  
Arlington, VA 22202-2733

You may also provide a response by e-mail to [hoffman.stephen@epa.gov](mailto:hoffman.stephen@epa.gov)

You may assert a business confidentiality claim covering all or part of the information requested, in the manner described by 40 C. F. R. Part 2, Subpart B. Information covered by such a claim will be disclosed by EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when EPA receives it, the information may be made available to the public by EPA without further notice to you. If you wish EPA to treat any of your response as “confidential” you must so advise EPA when you submit your response.

EPA will be closely monitoring your progress in implementing the recommendations from these reports and could decide to take additional action if the circumstances warrant.

You should be aware that EPA will be posting the report for this facility on the Agency website shortly.

Given that the site visit related solely to structural stability of the management units, this report and its conclusions in no way relate to compliance with RCRA, CWA, or any other environmental law and are not intended to convey any position related to statutory or regulatory compliance.

Please be advised that providing false, fictitious, or fraudulent statements of representation may subject you to criminal penalties under 18 U.S.C. § 1001.

If you have any questions concerning this matter, please contact Mr. Hoffman in the Office of Resource Conservation and Recovery at (703) 308-8413. Thank you for your continued efforts to ensure protection of human health and the environment.

Sincerely,  
/Suzanne Rudzinski/, Director  
Office of Resource Conservation and Recovery

Enclosures

**New Madrid Power Plant Recommendations (from the final assessment report)**

**3.2 Studies and Analyses**

The following recommendations and remedial measures generally describe the recommended approach to address current deficiencies at the impoundments. Prior to undertaking the recommended maintenance, repairs, or remedial measures, the applicability of environmental permits needs to be determined for activities that may occur within resource areas under the jurisdiction of the appropriate regulatory agencies.

GZA recommends that NMPP perform the following analysis and studies:

1. Confirm that the elevation of the SP2 Impoundment embankments meet the State of Missouri and the COE requirements for industrial impoundments within the Mississippi River flood plain.
2. Perform a hydraulic/hydrologic analysis of the impoundments including the adequacy of the impoundments to accommodate the PMP event required by the State of Missouri and the COE.
3. Perform a complete structural and seepage analysis of the impoundments that includes an analysis of the stability of the impoundments during the PMP and flooding of the Mississippi River. The analysis should also account for surcharge loads created by the stockpiling of ash near the impoundment embankments.
4. Evaluate the extent of wave action on the impoundment embankments and impacts on the stability of the slope; repair as necessary.
5. Based on its position as a downstream pond in the water treatment and discharge of ash products at the NMPP, it is likely that the Raw Water Pond contains ash products. GZA recommends the Raw Water Pond be included in future inspections and be subject to the operations and maintenance recommendations made herein.
6. Develop an EAP to reduce the potential for property damage, environmental damage, and/or loss of life in the areas affected by an impending dam break.
7. Evaluate the cause of sloughing on the western embankment of the AP1 Impoundment and SP2 Impoundment.
8. Evaluate the impact of toe removal on the stability of the western embankment of the SP2 Impoundment; repair if necessary.
9. Conduct video inspection of outlet pipes from decant structures.

**3.3 Recurrent Operation & Maintenance Recommendations**

GZA recommends the following operation and maintenance level activities:

1. Increased mowing of the grasses on the embankments currently vegetated with tall grasses. The COE recommends vegetation be kept to less than 12 inches in height on embankments to facilitate inspections and reduce the risk of burrowing animals (COE ETL 1110-2-571 "Guidelines For Landscape Planting And Vegetation Management At Levees, Floodwalls, Embankment Dams, And Appurtenant Structures", April 2009.)
2. Routine measurements of the groundwater levels in the monitoring wells to evaluate changes in groundwater and seepage conditions.
3. Repair the erosion and grade the gravel access road on the southern embankment of the AP2 Impoundment to allow proper drainage.
4. Clear deep rooted vegetation from embankments, top of impoundments, and within 50 feet of the embankment toes as recommended by the COE (COE ETL 1110-2-571 "Guidelines For Landscape Planting And Vegetation Management At Levees, Floodwalls, Embankment Dams, And Appurtenant Structures", April 2009.).
5. Topsoil and seed areas of poor vegetation in the AP1 Impoundment, AP2 Impoundment and SP2 Impoundment.
6. Provide protective cover over the HDPE liner in the AP2 Impoundment.

### **3.4 Repair Recommendations**

GZA recommends the following minor repairs which may improve the overall condition of the impoundment, but do not alter the current design. The recommendations may require design by a professional engineer and construction contractor experienced in impoundment construction.

1. Repair sloughed soil on the western embankment of the AP1 Impoundment.
2. Repair areas of erosion on the AP1 Impoundment, SP1 Impoundment, AP2 Impoundment, and SP2 Impoundment.
3. Repair rutting present on the SP2 Impoundment crest access road.

### **3.5 Alternatives**

There are no practical alternatives to the repairs itemized above.